

# INTERNATIONAL SEARCH REPORT

WO 2004/022526

Inter Application No

PCT/CA PCT/CA2003/001346

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7	C07C255/25	C07D295/096	C07D213/30	C07C317/22	C07F5/02
	C07D241/16	C07D277/24	C07C311/29	C07D215/14	C07D239/26
	C07D209/12	C07C259/10	C07C255/54	A61K31/275	A61K31/495

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C C07D C07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BEILSTEIN Data, CHEM ABS Data, EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE CA 'Online!'          CHEMICAL ABSTRACTS SERVICE, COLUMBUS,          OHIO, US;          OYA, SHUNICHI ET AL.: "New          Bisaminoethanethiol (BAT) ligands which          form two interconvertible Tc-99m          complexes"          retrieved from STN          Database accession no. 124:4081          XP002266549          abstract and RN 171103-93-8          &amp; NUCLEAR MEDICINE AND BIOLOGY,          vol. 22, no. 6, 1995, pages 749-57,          ---</p>	1,4,9,10
X	<p>WO 94 14811 A (CHONG KUN DANG CORP ; KWAK          HYO SUNG (KR); LEE CHONG RYUL (KR); LEE)          7 July 1994 (1994-07-07)          reference examples 18-B, 18-C, 18-E          ---          -/-</p>	1,4,9

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

15 January 2004

30/01/2004

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

Inte Application No  
PCT/CA 03/01346

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K31/4418 A61K31/4164 A61K31/4965 A61K31/426 A61P19/08  
A61P19/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE CROSSFIRE BEILSTEIN 'Online!          Beilstein Institut zur Förderung der          Chemischen Wissenschaften, Frankfurt am          Main, DE;          Database accession no. BRN 2447392          XP002266550          abstract          &amp; YUKI GOSEI KAGAKU KYOKAISHI,          vol. 30, 1972, page 68, 74</p> <p>---</p> <p style="text-align: center;">-/--</p>	1, 4



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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Seufert, G

## INTERNATIONAL SEARCH REPORT

Intern. Application No  
PCT/CA 03/01346

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; Database accession no. Reaction ID 1403344, 1403367 XP002266551 abstract & SUZUE, S.; IRIKURA, T.: CHEM. PHARM. BULL., vol. 16, no. 8, 1968, pages 1417-32, ---	1,4
X	DATABASE CROSSFIRE BEILSTEIN 'Online! Beilstein Institut zur Förderung der Chemischen Wissenschaften, Frankfurt am Main, DE; Database accession no. Reaction ID 227583 XP002266552 abstract & COOK ET AL.: : CHEM. SOC., 1949, page 3227, 3229 ---	1,4
A	WO 00 49007 A (EDWARDS PHILIP NEIL ;LARGE MICHAEL STEWART (GB); OLDFIELD JOHN (GB) 24 August 2000 (2000-08-24) abstract; claims; examples ---	1-29
A	WO 01 49288 A (MERCK FROSST CANADA INC ;ROBICHAUD JOEL STEPHANE (CA); ISABEL ELIS) 12 July 2001 (2001-07-12) page 34, line 25 -page 35, line 25; claims; examples ---	1-29
A	WO 00 55125 A (BRYANT CLIFFORD M ;BUNIN BARRY A (US); AXYS PHARM INC (US); KRAYNA) 21 September 2000 (2000-09-21) page 44, line 5 - line 18; claims; examples ---	1-29
P,X	WO 02 069901 A (BAYLY CHRISTOPHER IAN ;MERCK FROSST CANADA INC (CA); ROBICHAUD JOE) 12 September 2002 (2002-09-12) example 5; page 136, compounds 3 and 4 of the table; page 140, compound 11 of the table, page 144, compounds 1-3 and 6-8 of the table; claims ---	1-29
P,X	WO 02 098850 A (THURAIRATNAM SUKANTHINI ;LI JIAYAO (US); LINK JOHN O (US); ZIPFEL) 12 December 2002 (2002-12-12) page 146, line 22 - line 27 and claim 15 (page 193, line 9) claims 1,17-20 -----	1-29

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

The initial phase of the search revealed a very large number of documents relevant to the issue of novelty. So many documents were retrieved that it is impossible to determine which parts of the claim(s) may be said to define subject-matter for which protection might legitimately be sought (Article 6 PCT). For these reasons, a meaningful search over the whole breadth of the claim(s) is impossible. Consequently, the search has been restricted to compounds of the given formula in claim 1 where at least one of R7 or R8 is hydrogen and D is a cyclic residue. For these compounds search and search report may be considered complete. Documents referring to compounds outside the scope of the aforementioned restriction have been cited merely as an arbitrary selection of the many documents retrieved during the initial phase of the search.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

## INTERNATIONAL SEARCH REPORT

In  International application No.  
PCT/CA 03/01346

### Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  

Although claims 16–21, 23 and 24 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2.  Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  

see FURTHER INFORMATION sheet PCT/ISA/210
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 9414811	A	07-07-1994	AU EP JP JP WO KR US US CN JP	5717894 A 0674640 A1 2783683 B2 8507290 T 9414811 A1 9707946 B1 5641770 A 5756765 A 1098104 A 6335594 A		19-07-1994 04-10-1995 06-08-1998 06-08-1996 07-07-1994 19-05-1997 24-06-1997 26-05-1998 01-02-1995 06-12-1994
WO 0049007	A	24-08-2000	AU EP WO JP	2560300 A 1155010 A1 0049007 A1 2002537293 T		04-09-2000 21-11-2001 24-08-2000 05-11-2002
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WO 0055125	A	21-09-2000	AU AU BG BG BR BR CA CA CN CN CZ CZ EE EE EP EP HR HR HU HU JP JP NO NO PL PL SK SK TR TR TR WO WO US US	3746100 A 3748600 A 106003 A 106013 A 0009042 A 0009043 A 2368122 A1 2368148 A1 1362947 T 1364155 T 20013217 A3 20013248 A3 200100485 A 200100487 A 1178958 A2 1161415 A2 20010737 A1 20010738 A1 0200347 A2 0200503 A2 2002539191 T 2002539192 T 20014484 A 20014485 A 350453 A1 350456 A1 12882001 A3 12892001 A3 200103337 T2 200103390 T2 200201874 T2 0055125 A2 0055126 A2 2002086996 A1 2003096796 A1		04-10-2000 04-10-2000 28-06-2002 31-05-2002 26-12-2001 08-01-2002 21-09-2000 21-09-2000 07-08-2002 14-08-2002 17-04-2002 17-04-2002 17-02-2003 17-02-2003 13-02-2002 12-12-2001 31-10-2002 31-12-2002 29-06-2002 29-06-2002 19-11-2002 19-11-2002 26-10-2001 05-11-2001 16-12-2002 16-12-2002 04-04-2002 04-06-2002 21-03-2002 21-05-2002 21-10-2002 21-09-2000 21-09-2000 04-07-2002 22-05-2003

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

Intern Application No  
**PCT/CA 03/01346**

Patent document cited in search report	Publication date	Patent family member(s)			Publication date
WO 0055125	A	US	2003119788 A1		26-06-2003
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		ZA	200107494 A		11-09-2002
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			EP	1372655 A2	02-01-2004
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